

MATH INTERVENTIONS UPDATE

MONTHLY UPDATE FOR THE MATHEMATICS ACHIEVEMENT FUND GRANT

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VOLUME 4 – ISSUE 4



Mid-Year Survey Now Available

The mid-year survey for the Kentucky Department of Education is now posted and is open for all MITs to complete. The survey needs to be completed by **Saturday, January 30th**. The survey contains only 16 questions and should take about 5-10 minutes to complete. The survey must be completed online at the following link: https://www.surveymonkey.com/r/MIT_Mid-Year_2015-16. The survey can only be submitted online and will not be accepted in paper form. Just click the link above or copy the link into your browser to begin the survey. Be sure to click “Next” after questions 8 and 16. After clicking “Next” after question 16, you will be directed to the 3rd page to click “Done” to submit your survey. If you have any questions or concerns, please contact Pamela Pickens.

KCM CONFERENCE: “CALL TO ACTION”

Registration is now open for the 2016 Kentucky Center for Mathematics conference at the Griffin Gate Marriott Resort and Spa in Lexington, Kentucky. The conference will be held March 7th and 8th with a post-conference day on the 9th. The conference is dedicated to professional learning among P-16 educators working to improve mathematics achievement. Join Kentucky’s passionate, knowledgeable and ambitious mathematics education community as we work together to ensure the success of all students through the effective implementation of “high-leverage” teaching practices as described by the National Council of Teachers of Mathematics in their landmark publication, *Principles to Action: Ensuring Success for All*.

For more information: <http://www.kentuckymathematics.org/KCMConference2016/index.html>

Attendee Registration

Attendee registration will be available through February 26, 2016.

Attendee Registration Fee: \$125 (per person)

Undergraduate Student Registration Fee: \$45 (per person)

Room Monitor Registration Fee: \$0 (This options is for undergraduate students currently enrolled in a state-accredited university or college who agree to monitor a room for a minimum of 2 conference sessions.)

Department of Education

Office of Next-Generation Learners
Division of Learning Services
Differentiated Learning Branch

Associate Commissioner: Dr. Amanda Ellis
Division Director: Gretta Hylton
Branch Manager: April Pieper
Math Intervention Consultant: Pamela Pickens

Yearly KDE Requirements:

Beginning of the School Year

- ☒ Assurance Statement & Budget Summary
- ☒ Orientation Meeting
- ☒ Schedule Sent to the KDE

By October 30th

- ☒ Infinite Campus Intervention Tab Utilized

By January 30th

- ☐ Infinite Campus Intervention Tab Updated
- ☐ MIT Mid-Year Survey

By March 30th

- ☐ Infinite Campus Intervention Tab Updated

End of the School Year

- ☐ Infinite Campus Intervention Tab Completed
- ☐ MIT End-of-Year Survey

INTERVENTION TAB



Infinite Campus Intervention Tab Update

The following are required to have student intervention plans in the Intervention Tab in IC:

- All high school seniors who did not meet statewide ACT benchmarks on the junior year administration
- All Extended School Services (ESS) students
- All 3rd Year Focus Schools (for their students scoring Novice)
- All students served by Read to Achieve (RTA) grants
- **All students served by Mathematics Achievement Fund (MAF) grants**

Data will be pulled from the Intervention Tab quarterly, on October 30, January 30, March 30 and then the final pull on June 30.

There were common data entry errors noted in analysis of the 2014-15 data. Please consider the following:

- ✓ The Intervention Type (i.e., Course, ESS, Other) must be indicated in the tab.
- ✓ If the Intervention Type selected is "Course," then the appropriate *state* course code must be entered in the text box. **(No course code for MAF)**
- ✓ If "Other" is selected in any tab area, an explanation of "other" should be provided in the accompanying text box. This is the Intervention Type you would use for your KSI/ RTI interventions. In this case, the explanation for "Other" could simply be RTI.
- ✓ When selecting Intervention Type, if "RTA" or "MAF" is chosen, please understand that these are **primary** intervention grants that have been awarded to certain schools. You should not select "RTA" or "MAF" unless your school has one of these grants.
- ✓ When adding codes, please consult the latest edition of the Coding Document. Codes are added frequently, and a few codes have recently changed. You can find the most recent coding document [here](#).
- ✓ For Content Area of service, multiple content areas under the "Other" heading cannot be combined. If the student is receiving intervention services in reading and in math, then this must be recorded in two separate intervention records for the student.

If you receive communication from KDE about data entry errors, please be timely (within two weeks) in correcting those issues and informing KDE staff that the errors have been corrected.

Questions?

Please contact April Pieper at april.pieper@educaiton.ky.gov or by telephone at 502-564-4970, ext. 4519.

Resources for the Intervention Tab -

http://education.ky.gov/educational/int/ksi/Pages/ksiIC_InterventionTab.aspx

Mathematical Practice of the Month

To emphasize the Mathematical Practices, the CCSS gives them their own distinct section, but they are not to be thought of as a separate skill set to be handled in special lessons or supplements. The intent is that these *essential mathematical habits of mind and action* pervade the curriculum and pedagogy of mathematics, K–12, in age-appropriate ways.

4 – Model with Mathematics

Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

Resource: Common Core State Standards Initiative <http://www.corestandards.org/>



Anchor Charts for this Mathematical Practice

Resource: Jordan School District <http://elemmath.jordandistrict.org/files/2012/05/Standard-41.pdf>

Model with mathematics.
Mathematical Practice 4

I can recognize math in everyday life and use math I know to solve problems.

I can use...

(Pictures)  (Objects) 

(Symbols) $4 - 2 = 2$

I have 4.
I take 2 away.
Now I have 2. (Words)

...to solve everyday problems.

Left – K-1

Right – 2-3

Bottom – 4-5

Model with mathematics.
Mathematical Practice 4


I can recognize math in everyday life and use math I know to solve problems.


I can use...

I can use take-away to find the difference between the number of crayons Jill and Rob have.

(Words) Rob has 23 crayons. Jill has 46 crayons. How many more crayons does Jill have than Rob?

(Symbols) $46 - 23 = 23$

(Pictures) 

(Objects) 

Difference of 23 crayons

Rob's Crayons
Jill's Crayons

...to solve everyday problems.

Model with mathematics.
Mathematical Practice 4

I can recognize math in everyday life and use math I know to solve problems.

I can...

My box turtle is getting a new tank. He is $5\frac{1}{2}$ " long and 3" tall. One side length of the tank needs to be 5 times his length. How long will the length of the tank need to be?

Use estimates to make the problem simpler.
I will round $5\frac{1}{2}$ " to 6".

Find important numbers.
Turtle: About 6" long
Tank: 5 times the length of the turtle

Consider my answer – Does it make sense?
I thought about the problem again and a 30" side length on the tank makes sense!

Think about the relationship to find an answer.
The tank (30") is 5 times bigger than the turtle length (6").

Use tools to show relationships.

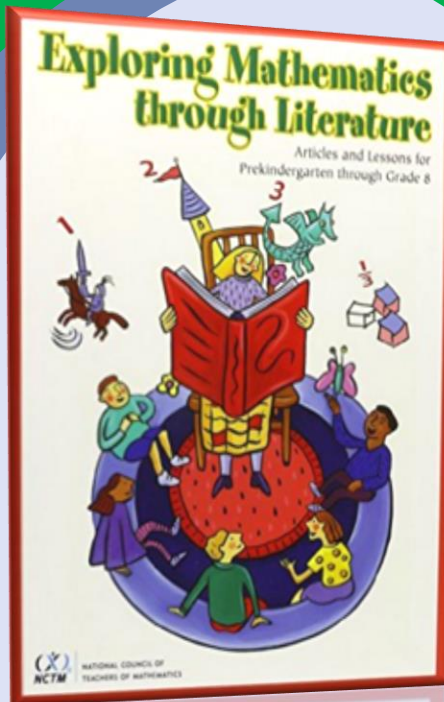
Turtle Length (inches)	Tank Length (inches)
4	20
5	25
6	30
7	35
8	40

...to solve everyday problems.

RECOMMENDED READING

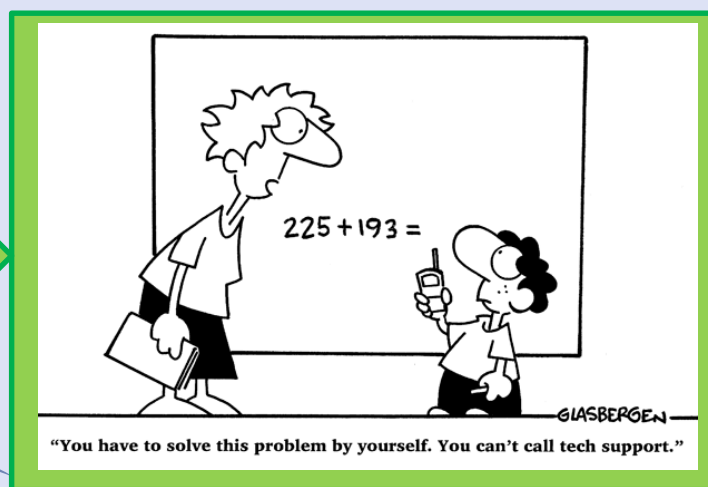
Exploring Mathematics through Literature

Articles and Lessons for Prekindergarten through Grade 8



As using children's books to teach mathematics has become more and more popular, interest has grown not only in the books themselves but also in how to more effectively use them. The focus of this collection of articles and lessons is to provide classroom examples of how to use children's literature to effectively teach mathematics in prekindergarten through eighth grade. The articles, previously published by NCTM, focus on the five content strands: number and operations, algebra, geometry, measurement, and data analysis and probability. The articles describe how the different authors have used specific books to help their students learn mathematics. Most of the articles involve communication, problem solving, representation, and reasoning, and some of them involve connections. All will help teachers use literature-based lessons that are both meaningful and enjoyable to students to teach mathematical content.

Just because you probably need a little chuckle at this time of the year. 😊



The Kentucky Center for Mathematics (KCM) is on **Pinterest**

So many teachers are using Pinterest to share ideas, now you can follow KCM for even more great ideas!

<http://www.pinterest.com/kcmmath/>

MAF RESOURCE PAGES

The Kentucky Department of Education MAF Resource Page -

<http://education.ky.gov/curriculum/conpro/Math/Pages/MAF-Grant.aspx>

The Kentucky Center for Mathematics MAF Resource Page -

http://www.kentuckymathematics.org/maf_resources_for_2015-2016.php

Awesome App

Bedtime Math is a personal favorite of mine. I just started using it with my boys, Zane (4) and Zack (2) after someone randomly mentioned it to me in the office. (I think I had mentioned feeling the pressure to have my little ones “LOVE” math.) If you haven’t seen this one, please check it out and share it with parents too.



Lots of parents know to read to their kids at night, but what about math? Most parents feel uncomfortable helping their children with math concepts or even discussing math topics at home. The mission of Bedtime Math is simple: to make math a fun part of kids’ everyday lives, as beloved as the bedtime story. Choose the Math Problem of the day, or explore over 400 additional math problems with various zany topics, ranging from electric eels and chocolate chips to roller coasters and flamingos. Each has three levels of challenge (“Wee Ones,” “Little Ones,” and “Big Kids”), and many also have harder questions (“The Sky’s the Limit”) for really big kids, grown-ups, and anyone who is feeling brave!

SERIOUSLY, MATH JOKES!

Five out of four people have trouble with fractions.

A hungry clock goes back four seconds.

A bicycle can't stand alone because it is two-tired.

Old mathematicians never die; they just lose some of their functions.

A calendar's days are numbered.

Old statisticians never die; they just undergo a transformation.



January 30, 2016 – Mid-Year Survey Due

January 30, 2016 – Infinite Campus Intervention Tab Data Pull

March 7-9, 2016 – KCM Conference, Lexington

March 30, 2016 – Infinite Campus Intervention Tab Data Pull

April 18, 2016 – Online data and DOR help session – online meeting

May 30, 2016 – End-of-Year Survey Due

May 30, 2016 – Spring data and DOR submission deadline

June 30, 2016 – Infinite Campus Intervention Tab Data Pull

A Quick Thought

One of the best parts of my job is traveling the great state of Kentucky to visit with MITs. Although I am not out as much as I would like, because of other job responsibilities, I always look forward to meeting with teachers and seeing the impact you are having with students every day.

I recently ventured out with my officemate and Read to Achieve (RTA) Coordinator Lori Shephard. We traveled at least 500 miles in 2 ½ days and met with several MAF and RTA teachers. We were blessed to observe lessons, talk with students, and get to know the intervention teachers on a personal level.

I want to personally say “Thank you” to DeRhonda Asher, Vonda Adams, Tracy Dixon, Priscilla Clay, Melanie Fields, Velvet Cross, and Leisa Frazier for welcoming me to your classrooms for a MAF visit. I really enjoyed talking with each of you and learning about how MAF is impacting your students. I am also very sorry that I took up so much of your time. I just really enjoyed chatting with each of you, but I am a “talker” to say the least. ☺

Here’s just a few highlights of our trip to make you laugh. We learned where not to stay in Hazard and how to get lost going less than a mile away for dinner. ☺ We enjoyed some yummy Mexican food in Pineville. I was extra pleased to see they had Hawaiian Fajitas on the menu. (My local restaurant took it off their menu and I haven’t had it in 2+ years.) We enjoyed cottage accommodations at Pine Mountain State Resort Park. We were lucky enough to indulge in the Jordan Smith Blizzard named for The Voice winner on the exact day he won. It was so delicious! Although our GPS estimated three hours to get home, we were still in the car seven hours later, after getting hung up in traffic and being rerouted to one-lane, gravel roads. We completely enjoyed each and every moment of the trip. ☺

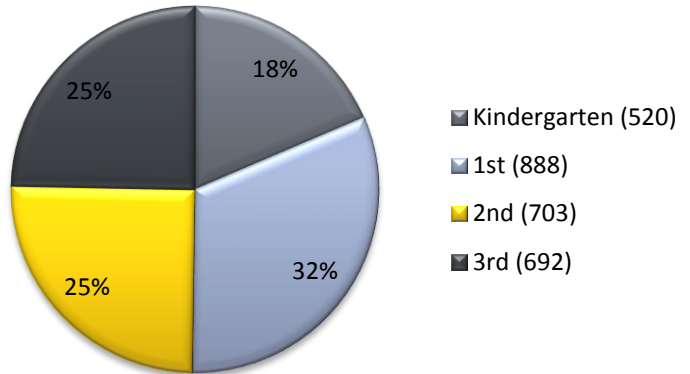


DATA, DATA, DATA

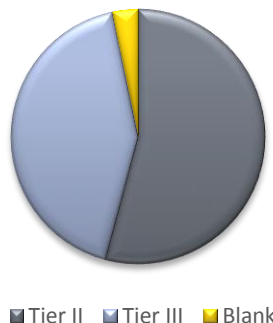
As I dig deeper into the data, I am contacting schools with follow-up questions and technical support. Below is a snapshot of some of the data pulled from the Infinite Campus Intervention Tab for MAF after October 30th, 2015.

- Currently, 3,307 records entered as MAF interventions.
- 2,813 are currently “Active” (Content: 2,790–Math, 3–Science, 20–Blanks)
 - Kindergarten – 520
 - 1st – 888
 - 2nd – 703
 - 3rd – 692
 - 4th – 7
 - 5th – 3
- 237 are currently “Inactive”
 - Grade Levels:
 - Pre-K – 1
 - K – 42
 - 1st – 86
 - 2nd – 65
 - 3rd – 47
 - 4th – 12
 - 5th – 4
 - Results:
 - 83 – Successfully Exited
 - 12-K, 21-1st, 24-2nd, 26-3rd
 - 28-Math Recovery, 10-Number Worlds, 16-Do the Math, 22-AVMR)
 - 46 – Exited to Another Interventions
 - 18 – Continue in Intervention
 - 62 – Moved from School
 - 20 – Blanks
 - 28 – Other:
 - 1 – Attendance
 - 17 – Continue intervention in classroom setting
 - 2 – Cycle not completed – schedule adjustments
 - 2 – moved grade levels (K back to Pre-K, 1st back to K)
 - 2 – Qualified for Special Education
 - 1 – Receiving FMD Services
 - 1 – In Special Education referral

MAF: Grade Level



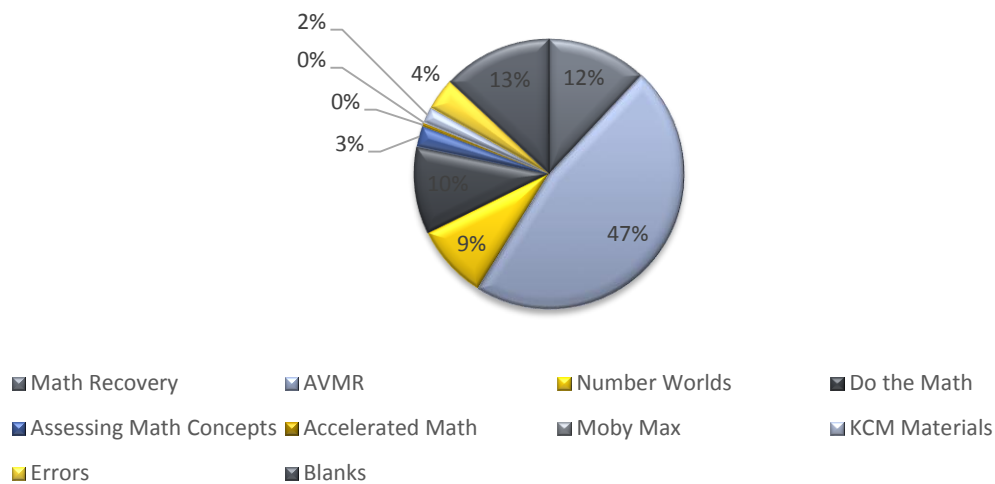
Tier Status



Other Notes:

- Active Referred: 92
- Date Issues:
 - All Inactive have Start Dates for 15-16
 - 4 have End Dates in 14-15
 - 2 in April 2016
 - 2 Start and End on Same Date 8/19/15
 - 1 End Date Happened before Start Date
 - Several Less than Month
- Location: 6 Off-Site
- Delivery:
 - 2,729 – In-Person
 - 6 – Online
 - 28 – Blended
 - 50 – Blank
- Staff:
 - 2,795 – Certified
 - 4 – Classified
 - 1 – Volunteer
 - 13 – Blank
- Frequency:
 - 1,740 – Daily
 - 142 – 2 times/week
 - 858 – 3-4 times/week
 - 39 – weekly
 - 4 – other
 - 30 – Blank
- Duration:
 - 294 – Less than 30 minutes
 - 1,997 – 30 minutes
 - 262 – 45 minutes
 - 16 – 60 minutes
 - 244 – Blank
- Skills Identified:
 - 2,447 – Number Sense
 - 2,020 – Computation
 - 1,968 – Numeracy
 - 1,951 – Reasoning
 - 219 – Geometry
 - 128 – Probability and Statistics
 - 197 – Measurement
 - 452 – Algebraic Thinking
 - 5 – Writing Mechanics
 - 2 – Writing Content

MAF: Intervention Materials 1



MAF: Intervention Materials 2

